DETAILED ACTION

1.   Applicant's affirmed election of Group I invention, claims 1-5, is acknowledged.

Because applicant did not distinctly and specifically point out the supposed errors in the

restriction requirement, the election has been treated as an election without traverse

(MPEP § 818.03(a)). Therefore, in view of lack of traversal to restriction requirement set

forth from Response to Restriction Requirement, the restriction set forth by the

examiner is deemed proper and is therefore made Final.
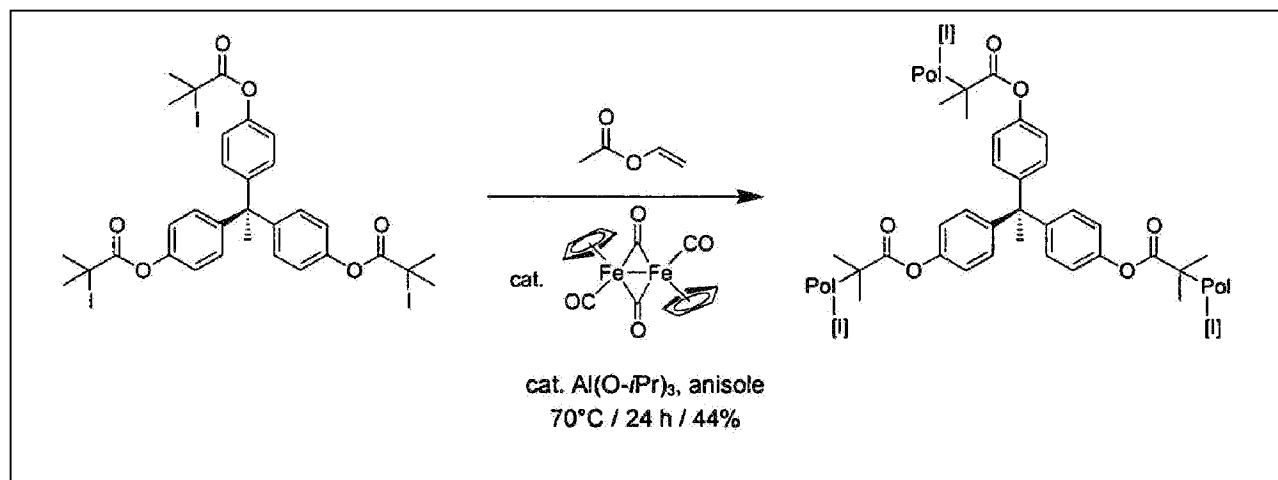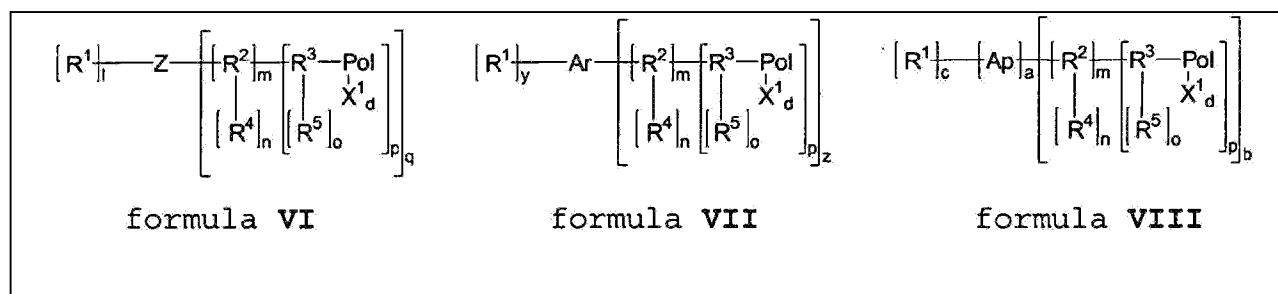
Claim Rejections - 35 USC § 112

2.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

3.   Claims 1-5 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply

with the enablement requirement. The claim(s) contains subject matter which was not

described in the specification in such a way as to enable one skilled in the art to which it

pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 (line 2) discloses structures that are adequately enabled by the specification as

written. When the examiner review the specification, the examiner finds that the working

example 3 (page 26) discloses initiator system that do not meet the structural

requirement set forth by the specification (page 25, line 20-23). Applicants must

recognize that the generic structures (VI, VII, and VIII) do not indicate the presence of a

carbonyl group or an ester group. Since the specification discloses preferable

embodiments that do not meet the structures as claimed, the examiner is unclear on

how the claimed structures are enabled. Therefore, the examiner has a reasonable

basis that the claimed polymers having specific types of terminal groups are non-

enabling because one of ordinary skill in art would not be able to make/use the

polymers being claimed.

formula **VI**   formula **VII**   formula **VIII**

cat. Al(O-*i*Pr)$_3$, anisole
70°C / 24 h / 44%

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5.   Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Janssen et al. (US 6,803,447).

1. (Original)   A polymer based on polyvinyl esters of the formulae **VI**, **VII** and **VIII**
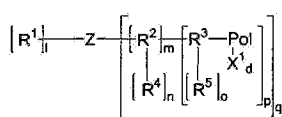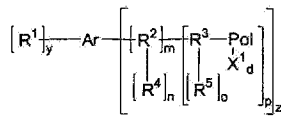
formula **VI**   formula **VII**   formula **VIII**

where

Pol   is a polymer based on a polyvinyl ester, and is more preferably a homo- or copolymer based on polyvinyl acetate,

Z   is a central atom and is an atom of group 13 to 16 of the Periodic Table of the Elements, preferably carbon, silicon, nitrogen, phosphorus, oxygen or sulfur, more preferably carbon or silicon, and

X^1 is in each case the same or different and is a halogen atom, preferably fluorine, chlorine, bromine or iodine, more preferably chlorine, bromine or iodine, and

R^1 is the same or different and is hydrogen or a C_1-C_{20} group, and

R^2 is the same or different and is a bridging C_1-C_{20} group between the central atom Z and the initiating [R^3-X^1] unit or silicon or oxygen, and

R^3 is the same or different and is carbon or silicon, and

R^4 is the same or different and is a hydrogen atom or a C_1-C_{20} group, and

R^5 is the same or different and is hydrogen or a C_1-C_{20} group,

l   is a natural integer and is zero, 1, 2 or 3, and

m   is in each case the same or different and is a natural integer and is zero, 1, 2, 3, 4 and 5, and

n   is in each case the same or different and is a natural integer and is zero, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 and 20, and

o   is in each case the same or different and is 1 or 2, and

p	is in each case the same or different and is a natural integer and is 1, 2, 3, 4 and 5, and
q	is a natural integer and is 2, 3 and 4, and
Ar	is an aromatic basic structure having at least four carbon atoms, in which one or more carbon atoms may be exchanged for boron, nitrogen or phosphorus, preferred aromatic or heteroaromatic basic structures being derived from benzene, biphenyl, naphthalene, anthracene, phenanthrene, triphenylene, quinoline, pyridine, bipyridine, pyridazine, pyrimidine, pyrazine, triazine, benzopyrrole, benzotriazole, benzopyridine, benzopyrazidine, benzopyrimidine, benzopyrazine, benzotriazine, indolizine, quinolizine, carbazole, acridine, phenazine, benzoquinoline, phenoxazine, each of which may also optionally be substituted, and
y	is a natural integer and is zero, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 and 20, and
z	is a natural integer and is 2, 3, 4, 5, 6, 7, 8, 9 and 10,
Ap	is a cyclic nonaromatic basic structure having at least three carbon atoms which may also contain heteroatoms such as nitrogen, boron, phosphorus, oxygen or sulfur, preferred aliphatic basic structures being derivable from the group of cycloalkyl, for example cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl, cyclooctyl, cyclononyl, or from the cycloheteralkyl group, for example aziridine, azetidine, pyrrolidine, piperidine, azepane, azocane, 1,3,5-triazinane, 1,3,5-trioxane, oxetane, furan, dihydrofuran, tetrahydrofuran, pyran, dihydropyran, tetrahydropyran, oxepane, oxocane, or from the group of the saccharides, for example alpha-glucose, beta-glucose, and
a	is a natural integer and is zero, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 and 20, and
b	is a natural integer and is 2, 3, 4, 5, 6, 7, 8, 9 and 10, and
c	is a natural integer and is zero, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 and 20,
d	may be the same or different and is zero or one.

According to claim 1 as written, the claimed invention relates to a polymer having a specific initiating group and a terminal halogen group at the opposite end of the polymer.

Janssen et al. (col. 10, example 2) disclose the preparation of an ATRP initiator that would meet the structure as claimed. In view of applicants' specification (page 26, example 3, the equation) disclose structures comprising a carbonyl group or an ester group that it is considered acceptable or within the scope of the structures being claimed. Therefore, the examiner has a reasonable basis to believe that the structure as disclosed in Janssen et al. adequately meet the generic structure of the terminal groups being claimed. Since Janssen et al. (col. 7, line 14) disclose that it is more preferably to use the disclosed catalyst to polymerize vinyl acetate. Therefore, in view of the substantially identical structure of the catalyst, monomers being claimed, and the substantially identical ATRP type polymerization mechanism, the examiner has a reasonable basis that the claimed polymer structures VI, VII, and VIII as disclosed in claim 1 are inherently possessed in Janssen et al. Therefore, claims 1-5 are anticipated.

In view of the 112 rejections set forth above, the rationale set forth for the instant 102 (e) rejection is adequate.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM K. CHEUNG whose telephone number is (571)272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David WU can be reached on (571) 272-1114. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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you have questions on access to the Private PAIR system, contact the Electronic

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William K Cheung/
Primary Examiner, Art Unit 1796

William K. Cheung, Ph. D.
Primary Examiner
October 26, 2008